From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Paul Bernhardt <bern@ppdu.nrl.navy.mil>
Subject: 6U5 Tube Needed
Message-ID: <Pine.A32.3.91.960917122716.3502A-100000@ppdu.nrl.navy.mil>

Gang,
  I need a 6U5 "Magic Eye Tube" for a Stromberg Carlson 1135. I have a 6E5 plus other tubes for trade or can pay $$$.
Thanks, Paul Bernhardt, KF4FOR

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Benjamin D. Hall" <bdhall@ghgcorp.com>
Subject: =20's in the SP-600 post
Message-ID: <323DC10A.4CD1@ghgcorp.com>

Hi folks, it has come to my attention that my SP-600 refinishing article had a truckload of =20's at the end of the lines. Sorry about that! I wrote it in my word processor and I think it added them. Anyone notice =20's in this message?

Anywho, if you'd like me to e-mail you clean copy of my article I'll be glad to delete out the =20's and pass it along...

73,
Ben
--

 From the computer of | Collector of fine firebottle
 Benjamin D. Hall, Houston Texas | equipment, as well as other things
 BDHall@GHGCorp.com -or- | involving Earth, Air, Water, and
 BHall@GP802.JSC.NASA.gov | Fire.

 "When you clock the human race with the stopwatch of history, it's a new record every time."

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: k1zat@dsport.com
Subject: Re: =20's in the SP-600 post
Message-ID: <Pine.GSO.3.95.960916225136.14043B-100000@puff>

Ben -

On Mon, 16 Sep 1996, Benjamin D. Hall wrote:

> wrote it in my word processor and I think it added them. Anyone notice
> =20's in this message?

That's something that goes with your host, it has to do with margins.
If the sentence is over 78 columns wide (I think that the right
number), your host and/or email package will add that. Easy thing
to do is keep it under 78 columns.

   jd

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: "Walter Fairclough" <wfairclo@netcom.ca>
Subject: Address ID
Message-ID: <199609172021.QAA15510@tor-srs1.netcom.ca>

Horrors! I have been signing my messages with the wrong Internet ID. So if
anyone is trying to reach me see correct ID below.

Regards to all you hearty souls har! har!

Walter Fairclough
Manotick, Ontario
wfairclo@netcom.ca

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: KWDouglas@aol.com
Subject: BC-604 (Delayed Reaction To A Thread)
Message-ID: <960917100852_103896262@emout16.mail.aol.com>

>
>The matching transmitter is a BC-604. This brings back some memories.
>When I was about 14, a friend & I ordered one from a surplus house...
>Ours arrived in the original mil-spec packaging. Unpacking it is an ex-
>perience I will never forget. We were rolling on the floor with laughter!
>It took us hours. We couldn't get it open... I remember layer after layer
>of wooden box well nailed, foil coated paper wrap, cushioning. It was box
>after box. I swear, if any of our military equipment, packaged like this,
>remains buried or submerged somewhere, it is still quite intact.
>
You speak truth about the tank radio mil packaging. A friend & I made a
pilgrimage to the hallowed halls of Esse Radio, Indianapolis, during summer
break, `60 or `61. We had to take the back seat out of my 4-dr sedan to get
the crate in. My buddy then got the hilarious idea to remove/disguise all

the government markings on the wooden crate. In their place we stenciled, in enormous letters, "BOURBON"!

The next step in his nefarious plan was to make a stop at a couple of his university ham buddies & in hushed tones explained that we had been in downtown Indy & had seen this crate fall out of a delivery truck as it sped away from a liquor store. We would then (after a staged glance to make sure no one else could see) quickly lift a blanket from the crate to expose the altered identification. We said we would meet at one of the ham's pad at dusk that night & to tell NO ONE! At the meeting we would carefully open the crate & thoroughly EXAMINE the contents.

At the appointed hour, we pulled up to a crowd of thirst crazed college guys. Obviously, something had gone dangerously wrong with all the pledges of secrecy (as we suspected it might)! They were all brandishing hammers, saws, pry bars, & some tools I couldn't identify. It was everything short of chain saws.

The co-conspirator & I didn't have to do a thing but stand back & enjoy. The back doors were flung open, blanket ripped off, crate dragged out, & the crowd set to their task with gusto. In their haste, in that dusk, no one noticed other clues that should have given it away to the hams in the group. We muffled our hysterical laughter at the sight of this near riot having their way with the packaging until the deed was completed.

As the shock of realization that they had been "had" sank in, there was a wide range of reaction from humor to anger. Some folk were inclined to use the tools on us, but for cooler heads. But, it was well worth the $3.95 I paid for the BC-604. And, I didn't have to struggle with unpacking it!

Kent, K9JCR
KWDouglas@aol.com

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Jay Coward <jayc@hpmsd2.sj.hp.com>
Subject: RE:BC-604 (Delayed Reaction To A Thread)
Message-ID: <9609171951.AA20265@hpmsd2.sj.hp.com>

Greetings to the Group,
 I was 16 when I got my BC-604.I had a friend who lived in N.Y.C. and I would take the bus in from N.J. and we would go down to Canal street and roam around all the fabled places.G&G had an entire wall of T-20 ARC-5's new in the box in addition to mounds of other stuff.If you think your old mil gear smells good you should have smelled G&G! Anyway, one time my friend and I went into this dark and murky shop and I tripped over a BC-604 with the Dyno in it and a full set of xtals.I just had to have it so I shelled out 10 bucks

and then we proceed to lug the thing all the way back to the Port Authority building.You should of seen the looks we got from folks on the subway. Well, that -604 sat on my lap all the way out to Jersey and when it was time to get off the bus my legs were so numb I could barely move! I finally got it home and hooked it up to my trusty 24v Fair Radio Power Supply Kit (back then they sold PS kits to run the gear they sold) and Holy Cow the thing worked! I was amazed (and still am when I get a piece of old mil gear and it still works first time I fire it up)Had fun with it but no longer have it.Heck,I don't have any more room anyway!
73 Jay
PS I still have the Fair Radio power supply tho.
--

NOTIFY PILOT BEFORE UNLOCKING AUTOTUNE

HEWLETT John Jay Coward 39201 Cherry Street MS NK10
PACKARD jayc@hpmsd2.sj.hp.com Newark, California 94560
Communications Components Division 510-505-5614 Fax 510-505-5560

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Glenn Finerman <GFINER@nms.com>
Subject: Browning Golden Eagle
Message-ID: <s23ed620.085@nms.com>

Like other list members I've read about, I'm trying to collect some "odd" pieces from my old novice station.
I'm looking for the "Browning Golden Eagle" (Mark 3 or 4 model..not sure) CB twins transmitter receiver pair manufactured aprox. late 60's early 70's. They were tube units (of course) light gold in color (not the dark brown earlier models) and I believe they were just AM.
Although this is a Chicken Band radio, it did sit right next to my DX-40 and S-108. I would fire it up for an occasional reminder of why I was studying for my general!!
I eventually sold it and used the money to buy more ham gear.
I've always wanted to convert this rig for 10 meter AM use. It would be a real kick for me to have this rig once again and to liberate this great rig to it's rightful place on the 10mtr BA freq!!
If you have one of these you would be willing to sell/trade, or if you know someone (ex CB'er looking for some ham gear??) please contact me.

Thanks & 73.....Glenn N2BJG GFINER@NMS.COM

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: avidov@juno.com (abe nutkis)
Subject: BX-19A identified
Message-ID: <19960917.122533.7999.2.avidov@juno.com>

on ba884(?) someone req info on the bx-19a spares tubes box.
Fyi it fits in the CH-121 case which is used with both the SCR-193 and
SCR-399A. I also have a couple of them,NOS if anyone is interested.

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: dj@bllac.JPL.NASA.GOV (Dayton Jones)
Subject: Cable lacing
Message-ID: <199609172052.NAA02406@bllac.jpl.nasa.gov>

Pete (WA5JCI) recently posted a message on where to buy cable lacing
cord. If anyone is planning to make some new cable harnesses, I have
just the accessory you need: the May 1996 NASA "Workmanship Standard
for Interconnecting Cables, Harnesses, and Wiring", complete with
diagrams of various lacing stitches to use for cable harnesses. Free
to the first person who wants it. 73,

Dayton Jones
(dj@bllac.jpl.nasa.gov)

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: jcreid@CCGATE.HAC.COM
Subject: Cadillac audio
Message-ID: <9608168429.AA842919280@CCGATE.HAC.COM>

Greetings!
  Yesterday I spent some time at the local auto junkyard. This one where you
bring your own tools, pay a buck at the door, and take the parts off yourself.
You're then charged accordingly on the way out. I enjoy going even if I don't
find what I'm looking for.
  I was strolling around the GM section when I spotted the remains of a '58
Cadillac. Neat car, but too far gone for even the most rigorous restoration.
It must've come from back east with all the rust on it. Most of the dashboard
had been removed or rotted away leaving the original radio exposed to the
elements. It was easy to spot a couple tubes sticking out, so I liberated a

pair of Delco 12V6's. Dang! That must've been some audio when that thing was cranked up. I didn't pay close enough attention to see if it was one of those WonderBar radios. I may go back and liberate the whole thing just to have one. Of course with my luck, the car will have already gone off to the crusher.

-Jim N6SVS
jcreid@ccgate.hac.com
Gardena, CA

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Manuel A. Maseda" <mmaseda@gte.net>
Subject: CE100 Info Wanted
Message-ID: <323DFC8B.21E2@gte.net>

Hello BA Fans,

I just picked up a couple of Central Electonics 100V's. I really don't know much about them as I'am primarly a Collins person. I'd be interested in hearing from anyone who has any knowledge of them and can share any experiences with me.

Manuel WF1J

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: "Paul Bock" <pauboc@smtplink.pulse.com>
Subject: Creative contest code (humorous)
Message-ID: <9608178430.AA843002763@smtplink.pulse.com>

During the VHF Contest this past weekend I heard one of the funniest contest exchanges ever. While waiting for a chance to call W3CQH/R (i.e., /rover, who had just crossed into a new grid square) on 2m SSB, I heard him trying to complete a contact with another station. The other station was having trouble copying the middle letter of W3CQH's callsign suffix, and after numerous attempts the distant operator finally said, "Try sending it on CW." W3CQH, not having a key in the car, shouted back, "Dah-dah-di-dah! Dah-dah-di-dah!" The response was gales of uncontrollable laughter, finally followed by "QSL, OM, we got it that time!"

Morse code lives on!

73,

Paul, K4MSG

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "William D. Lambert" <blambert@interpath.com>
Subject: Drake C-Line S/N's
Message-ID: <199609162155.RAA28196@mail-hub.interpath.net>

Thanks to everyone that responded to my question about late C-Line serial numbers. Your information is very much appreciated.

73,

Bill - AK4H

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: fbsnyder@mail04.mitre.org (Forrest B. Snyder Jr)
Subject: DX-40 Novice Station Wanted
Message-ID: <960917094243.30165@mail04.mitre.org.0>

A good friend of mine seeks to re-create his original novice station and is looking for the following:

Heathkit DX-40   Prefers operational -- not a smoker -- no major modifications/additional holes in the front panel.

Knight Ocean Hopper with coils. Qualifications as above.

If you are willing to part with either of these items, please contact him directly by eMail at

redfree@erols.com

Forrest Snyder (N4UTY)
"Sure, it's 1957 technology, but it's GOOD 1957 technology!"

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: ECSS
Message-ID: <9609171200.aa26765@pcusa01.ecunet.org>

OK, ECSS stands for Exalted Carrier Single Sideband.

This is an old technique, widely known since the '30s.

The idea is reduce the effects on an ordinary envelope detector of selective fading of AM sigs.

Multipath causes frequency-selective fading. This puts narrow notches into the spectrum of a signal. If the notch falls on the sig's carrier, then the amplitude of the carrier goes way down while leaving the sidebands intact.

What this means is too much sideband power relative to the carrier power at the receiver's detector. This gives dreadful sounding overmodulation during the time the carrier has faded. We've all heard it, ugh!

So the exalted carrier deal is to substitute a nice strong BFO for the faded carrier so that there's more than enuf carrier power relative to the sidebands at the detector. Then, the envelope detector will have no problem with distortion-free detection of an AM sig.

There's only one catch here: With a double sideband signal, the substitute carrier (from the BFO) *must* be phase-locked to the missing carrier or other kinds of distortion result.

Well, phase-locking on a fading carrier is pretty tough to do & requires fancy circuitry.

A fix is to eliminate one of the sidebands (it's redundant anyway) before the sig gets to the detector.

This is not always perfect though. If the sig's carrier level gets really high, it'll beat with the BFO giving a low frequency hetrodyne.

Of course this all requires a very steady receiver oscillators (HF, multiple conversion, and beat frequency) or you'll be playing with the tuning endlessly.

In the days that ECSS was first thought of, there were no sharp SSB-type filters around. So the BFO was made quite powerful.

These days, sharp SSB filters attenuate the carrier a great deal and product detectors are the rule, so the BFO doesn't need to be the powerhouse of before. But this is really cheating, as in this case the SSB filter just turns an AM sig into an SSB sig before it gets to the detector. Then it's just treated like any SSB sig.

-John Sehring (09/16/96 5:13 pm MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Steve Ellington <n4lq@iglou.com>
Subject: Re: ECSS mode
Message-ID: <Pine.GSO.3.93.960916184344.14948B-100000@iglou2>

Let's see if I can spell this: Exhaulted Carrier Suppressed Sideband.
In other words, tuning an AM. signal while leaving the bfo turned on as if
it were an ssb signal which enables one to take advantage of their narrow
ssb filter thus increasing the signal/noise ratio and gaining the ability
to copy AM through qrm but at the same time sacrificing fidelity.

> To: boatanchors@theporch.com
>
> What *exactly* is the ECSS mode?
>
> -John Sehring (09/16/96 9:22 am MT @Baker, Montana) UCC wb2eqg
>

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: knudsen@gvmail.ih.lucent.com
Subject: Re: ECSS mode
Message-ID: <9609162309.AA05243@bock.ih.lucent.com>

Better yet, if you synchronize (phase lock) the BFO to the received
carrier, you don't have to lose any fidelity either, and will
actually gain some during selective fading. This is Synchronous Detection.

There is a classic form of Exalted Carrier where the IF passband permits
one sideband plus a high peak at the carrier freq, so the carrier arrives
at the diode detector quite a bit stronger than the sideband. This improves
difelity under selective fading. No BFO, phase locking, or product
detector required.

Another version is to have a separate, very narrow filter for just the carrier,
and to insert this at the prod detector instead of a BFO.
The great (in every sense of the word) CV-157 adapter had this mode,
as well as synch detection and independent SSB.

Now just what that Racal has, I don't know...

We've all tried copying an AM signal using just one sideband and a carefully
adjusted BFO when the QRM was in the other sideband, right? And on some
RXs the BFO will "pull" into lock with the carrier if you're lucky.

SOme guys wrote articles in the HSN about adding an extra cap or two
to help their R390s (or some other great rx) pull the BFO -- I think
they called it "self-locked detection" or the like.

We could all have a grand time homebrewing various boxes to process
the 455 or 500 KC stuff out the back of our favorite rx....73, mike k aa9rg

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: pmills@cyberhouse.com (Phil Mills)
Subject: Re: ECSS mode
Message-ID: <199609162338.SAA20592@ns.cyberhouse.com>

Thanks for the explanation Steve. Turns out then, that my
75S-3 is ECSS capable as it does not turn off the bfo when switched
to AM. Learn something new every day no matter how hard I try not to...

thanks & 73,
Phil

>Let's see if I can spell this: Exhaulted Carrier Suppressed Sideband.
>In other words, tuning an AM. signal while leaving the bfo turned on as if
>it were an ssb signal which enables one to take advantage of their narrow
>ssb filter thus increasing the signal/noise ratio and gaining the ability
>to copy AM through qrm but at the same time sacrificing fidelity.
Phil Mills, AB5TH   **** Wanted -- Tek 3A1 plug-in   *****
pmills@cyberhouse.com   ****   -- 1957 ARRL Handbook   *****
713-992-5762
Friendswood, TX   (south of Houston)

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Benjamin D. Hall" <bdhall@ghgcorp.com>
Subject: Re: ECSS mode
Message-ID: <323DEEA7.5AB1@ghgcorp.com>

Steve Ellington wrote:

> Let's see if I can spell this: Exhaulted Carrier Suppressed Sideband.
> In other words, tuning an AM. signal while leaving the bfo turned on as if
> it were an ssb signal which enables one to take advantage of their narrow
> ssb filter thus increasing the signal/noise ratio and gaining the ability
> to copy AM through qrm but at the same time sacrificing fidelity.

Exactly! I think ECSS was or is still a trademark of *GASP* Japan Radio
Corporation. I know they advertised it in Passport to World Band Radio in
the 95 or 96 issue. In fact, while it doesn't call it ECSS, my Drake 2B

manual tells how to do it. (basically, on the 2B you set the passband to the center, zero beat the carrier, flip on the product detector, and adjust the passband for optimum signal. It really reduces fading significantly. On the Racal, it is the same process: tune signal in AM for zero beat, turn on USB or LSB mode, no further tuning required. It is a bit more time consuming on the other AM rigs around here, but can be done.)

Interestingly enough, the QRM around here is so bad that I get better fidelity on the Racal in ECSS. Now, the heavy iron lacks the stability to do ECSS, but then again, tuned front ends are wonderful at keeping the hash out.

I use it here in QRM-hell to kill hash from my computer, and it is really great for fading DX SWBC. That is what I use it for mostly.

73,
Ben
--

```
 From the computer of            | Collector of fine firebottle
 Benjamin D. Hall, Houston Texas | equipment, as well as other things
 BDHall@GHGCorp.com -or-         | involving Earth, Air, Water, and
 BHall@GP802.JSC.NASA.gov        | Fire.
```


"When you clock the human race with the stopwatch of history, it's a new record every time."

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: Re: ECSS mode
Message-ID: <Pine.GSO.3.93.960916171849.17144B-100000@uhunix5>

I do that but I didn't know there was a name for it!
Jeff KH2PZ / KH6

On Mon, 16 Sep 1996, Steve Ellington wrote:
> Let's see if I can spell this: Exhaulted Carrier Suppressed Sideband.
> In other words, tuning an AM. signal while leaving the bfo turned on as if
> it were an ssb signal which enables one to take advantage of their narrow
> ssb filter thus increasing the signal/noise ratio and gaining the ability
> to copy AM through qrm but at the same time sacrificing fidelity.

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: KA9EGW@aol.com

Subject: Re: ECSS mode
Message-ID: <960917085002_310474934@emout13.mail.aol.com>

Been doing this for years...but I have always known there were other names for it--or at least for the conditions that necessitate it--spelled by holding down the shift key and randomly hitting number keys...hi!

73 de ka9egw

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Al Klase <alklase@prolog.net>
Subject: Re: ECSS mode
Message-ID: <199609171532.LAA09820@ns1.ptd.net>

At 05:49 PM 9/16/96 -0500, Steve Ellington wrote:

>Let's see if I can spell this: Exhaulted Carrier Suppressed Sideband.

Well, I know he can't spell exalted. I also think Japan Radio Corporation's acronym (Had to look up the spelling of acronym) stands for Exalted Carrier Selective Sideband.

I also feel compelled to add my 2+ cents to this thread:

First, the problem: selective fading. HF skywave signals may arrive at your antenna by two or more paths of different lengths. At times these signals are phased such that they cancel each other out. The aural effect is that a narrow notch or null sweeps across the signal your trying to listen to. This is not a big problem when the null is in one of the sidebands, just a little swishing distortion. However, when the null eliminates the carrier all hell breaks loose. We tend to forget that a diode type AM detector is really a mixer or product detector with only one input port. The BFO signal is provided by the AM carrier. This mixes with the sidebands, and the products appear as the audio and DC outputs of the detector. So loosing the carrier not only causes the audio to sound something like SSB, but also screws up the AVC as well.

One of the classic (attempted) solutions to selective fading is exalted carrier reception where the carrier is amplified more than the sidebands. This gives a margin of protection against fading, but still has some problems. I even recall one of the National adds in a prewar QST explaining how to use the crystal filter in the HRO receiver to exalt the carrier for AM use.

Most modern implementations use a phase lock oscillator, synchronized to the carrier, as the BFO and a product detector to acheive synchronous detection. This has the added attraction that you can design such a

detector with an image-cancelling mixer to allow sideband selection. In most of these schemes, and the JRC ND-535 is no exception, the BFO tends come out of lock on deep and extended carrier fades.

        BTW, the real solution to selective fading is space diversity: two antennas and two receivers.

CUL
Al
Al Klase - N3FRQ
alklase@prolog.net
Flemington, NJ

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: "Ray L. Mote" <rmote@rain.org>
Subject: Fair's out of refurbed R-390A PTO's, too!
Message-ID: <Pine.SUN.3.94.960917101103.8151A-100000@coyote.rain.org>

All I could get was a used one. Take heed.
73.....Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA ex-W6RIC

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: "Barry L. Ornitz" <u856010@eastman.com>
Subject: Fastest Scopes (was: rise time)
Message-ID: <Pine.ULT.3.91.960917191030.19517F-100000@dua150.kpt.emn.com>

On Tue, 17 Sep 1996, Arnoud van der Wel asked:

> Lets bend this question around to tube oscilloscopes. The distributed
> amp in my Tek 585A has a risetime of 3.7 nS. The bandwidth of this
> scope is (depending on which manual you believe) about 80-100 MHz
> (-3dB).

But remember that the distributed amplifier uses multiple deflection plates in an artificial transmission line arrangement. Its frequency response characteristics differ considerably from scopes using conventional amplifiers and a single pair of deflection plates. [But I believe its response really is fairly Gaussian.] Unlike many scopes whose response falls off rapidly above its upper frequency limit, the 585A's response seems to fall off quite gradually and its trigger circuits are fairly function to above 400 MHz.

> Now: Is this the fastest tube scope ever made? I think the 585A

> qualifies as a tube scope (even though some sand may be found in it
> if you look hard...) I know there were faster scopes like the 1GHz
> Tek 519, but does this thing have a tube vertical amp? What about
> HP? Who made the fastest tube scope? how was it done?

There is a discussion in Spangenberg's book on vacuum tubes that talks of the practical upper frequency limit for conventional cathode ray tubes at the time (which was around 30 to 100 MHz). The deflection plates must be quite small in terms of fractional wavelength, and the speed of the electron beam going past the plates interacts too so even the CRT has a frequency response problem (different frequencies produce different deflections) - even without the deflection amplifier. The 585 design was one way to attack the problem. Other techniques were also used (like post deflection acceleration, I think). Stan Griffiths would be the best person to ask so I will defer to his experience. Trace brightness and linearity become BIG issues as you push the scope limits. I'll read the chapter in Spangenberg tonight if questions continue. [That is after playing with the 13 Keeshonden.]

BTW, Twente University of Technology, where Arnoud is posting from, is the home of an excellent computer program called Tutsim. For the few of us "old timers" who fondly remember analog computers, this program will really impress you. I also have the companion program Fansim.

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: dlr13@psu.edu (Doug Ripka)
Subject: Flea at MIT report
Message-ID: <199609171141.LAB77516@r05n01.cac.psu.edu>

Hi Gang,

My wife and I went to New England this weekend, and I had the chance to go to the Flea at MIT.
This fleamarket is primarily computer stuff, but with some BA's, as follows:
All prices were asking prices:

Zenith TO, looked like 8G005, "working", $115
Johnson Ranger, $300, looked cosmetically OK
Hallicrafters S-20R, very nice front, couple of minor scuffs on top, $75
S-119 Sky Buddy II, $35
SX-101 mark III, $100, cosmetics OK
S-38, painted top, $35
Hammarlund HQ-120, "oscillator problems", $85
Hammarlund HQ-170, "working", $130
NCX-5, with speaker and manual, "working", $175

Eldico R-104, T-102 and patch/wattmeter, $175
Vibroplex model X, complete, extensive wear on nickle plating, $225
Vibroplex Original, Black base, chrome parts, weights modified, $70
814 vacuum tubes, WWII JAN manufacture, $7 ea. NIB
805 vacuum tubes, new but packaging falling apart, 2/$15

73,
Doug Ripka (dlr13@psu.edu)
KA3TTQ

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: DEE ALMQUIST <SOUNDNMIND@rica.net>
Subject: FS HAMMAR HQ-129X
Message-ID: <19960916144542090.AAA114@har-dialin-5.rica.net>

Hi gang

I recently came by a NEAR MINT Hammar HQ-129X in cabinet. This unit is recapped and new ft panel. Because of condition am asking $200. I will do some trading, however. Will trade for tx or audio tubes new in box (211A, 6146B, 4-400, 6KG6/EL509, 6922, 6L6GC, KT-66, KT-88, EL-34, AND OTHERS) or will trade for certain hi fi audio amps.
'73
Dee
Patty, KA4EKK & Dee, W4PNT

PATTY AND DEE'S MARINA, COLLECTORS OF RADIO AND AUDIO BOATANCHORS...

We are the TUBE GOFFERS. We will do our best to find what you want!

http://home.rica.net/soundnmind

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: DEE ALMQUIST <SOUNDNMIND@rica.net>
Subject: FS PARTS HAMMAR HQ-140
Message-ID: <19960917153808245.AAA175@har-dialin-47.rica.net>

Hi Gang
I'm parting out Hammar HQ 140. I have no panel or knobs for this chassis but I do have bunch stuff incl power XF. Any interest??
Dee, W4PNT
Patty, KA4EKK & Dee, W4PNT

PATTY AND DEE'S MARINA, COLLECTORS OF RADIO AND AUDIO BOATANCHORS...

We are the TUBE GOFFERS. We will do our best to find what you want!

http://home.rica.net/soundnmind

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Bob Rolfness <rsrolfne@atnet.net>
Subject: FS: & Value
Message-ID: <323ECAC2.70DF@atnet.net>

Hello Tube Typers -

A friend just brought over a Western Electric Model 911A Data Test Set.
Have no idea what, who, etc. But it looks most impressive. Seems to be
just very dusty with no physical problems.

Any one know of a value and can't live with out it?

73's Bob W7VZX

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: FS: & Value
Message-ID: <Pine.ULT.3.95.960917125552.2604A-100000@admin.aurora.edu>

On Tue, 17 Sep 1996, Bob Rolfness wrote:

> A friend just brought over a Western Electric Model 911A Data Test Set.
> Have no idea what, who, etc. But it looks most impressive. Seems to be
> just very dusty with no physical problems.

The 911A is a teleprinter test set. It has a test sentence generator
that will genereate RY's or the "quick brown fox" message. You can
introduce distortion into the signal as well. It is current loop or
RS-232 output. The other part is a distortion analyzer, which shows
the various type of distortion and the percentage. There is one plug-in
module for the generator which determines if the test message is in
Baudot or ASCII. It is core memory type circuitry. I don't know what
the value would be but for anyone into teletype, it is extremely
usefull.

        E-mail broehrig@admin.aurora.edu   73 de Bob, K9EUI
            CIS: Data / Telecom   Aurora University, Aurora, IL

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: "B. D. Hall" <BDHall@ghgcorp.com>
Subject: FS: 7788 tubes, tested good
Message-ID: <323ECE0D.6AB5@ghgcorp.com>

Hello folks...

I have a small quantity of used, tested good in equipment 7788 tubes for
sale for $15 each plus shipping. They sell new for around $30 each.

Thanks and 73,
Ben
--
****
* Benjamin D. Hall, Houston Texas   *
* BDHall@GHGCorp.com BHall@GP802.jsc.nasa.gov *
****

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Tom.Daley@530.gigo.com (Tom Daley)
Subject: fs: drake r-4b
Message-ID: <6f4_9609161443@gigo.com>

hello ba people i have for sale (1) drake r-4b hf receiver
works good with great front panel/knobs/dial/meter (some wear
on maining tuning knob insert). no mods! chassis in good
shape with no green grunge. case has the usual minor scratches.
complete with original manual. nice looking but its gotta go
$135 or offer ?? shipping extra. thanks 73 tom
--
: Fidonet: Tom Daley 1:203/530 .. speaking for only myself.
: Internet: Tom.Daley@530.gigo.com

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
Subject: FS: tube testers

Tube testers for sale:

Sylvania 140, "dynamic tester" $60;
B&K 500 with 610 module, mut. con. $95;
Jackson 648A, mut. con. $95;
Hickok 600A, mut. con. $95,

Eico 667, mut. con. $75.

All work fine and are in good to very good cosmetic condition. Plus
shipping from Buffalo, NY.

Mike

------ Forwarded message ends here ------

* *
* NOTE: The message above is a re-post from the newsgroup rec.radio.swap. *
*   All replies *must* go to the person making the post, not me.   *
* *

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Fwd: FS: tube testers
Message-ID: <77709.ddillman@igc.apc.org>

----- Forwarded message begins here -----

From: MZak7 <mzak7@aol.com >
Newsgroups: usenet.rec.radio.swap
From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Fwd: hallicrafters SX101A - $75 - D.C. area
Message-ID: <77715.ddillman@igc.apc.org>

----- Forwarded message begins here -----

From: Larry Wolken <rhys@ix.netcom.com >
Newsgroups: usenet.rec.antiques.radio+phono,&,usenet.rec.radio.swap
From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Emile Imberman/US/3Com
Subject: GE SSB Selector
Message-ID: <9609172153.AA9061@hqsmtp2.ops.3com.com>

Hi Guys,

This is a great forum for someone like me, who enjoys the BA equipment but not too technical. Anyway, I stumbled upon an opportunity to buy a 51J3 in a rack 4 ft. rack cabinet and it is worth working on and getting cleaned up, etc. In the same cabinet, there is a BC-639-A (I know what that is) and a General Electric Single Sideband Selector. The manual says that you install this in your AM rcvr between the audio and product detector. The unit itself is a rack mount and has a cable that actualy contains a small box and circuit that connects inside the AM Rcvr. The instructions show how to interface it to various receivers of the day ie, HQ129 and others. The only caveat is that the IF must be 455 KHZ. This unit has push buttons on the front panel which allow you to select which sideband to select or both.

Anyone out there know what the value of this item would be? Please let me know.

emile_imberman@3mail.3com.com or call me ---- Work 972-628-2122

FAX 972-628-2198

Thanks in advance for your help.....Emile, KG5CY

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: "E.V. Sandy Blaize" <ebjr@worldnet.att.net>
Subject: Re: GE SSB Selector
Message-ID: <19960917235000.AAA73@LOCALNAME>

At 09:50 PM 9/17/96 +0000, you wrote:
>
>General Electric Single Sideband Selector. The manual says that you install
>this in your AM rcvr between the audio and product detector. The unit itself
>is a rack mount and has a cable that actualy contains a small box and circuit
>that connects inside the AM Rcvr. The instructions show how to interface it to
>various receivers of the day ie, HQ129 and others. The only caveat is that
the
>IF must be 455 KHZ. This unit has push buttons on the front panel which allow
>you to select which sideband to select or both.
> Anyone out there know what the value of this item would be? Please let me
>know.

Emile,

Sounds like you have GE model YRS-1 SSB adapter! It is similar to the Central-Electronics model A sideband slicer. There is a product detector, etc. in them both, but the YRS-1 will "lock" on a signal using a pilot or residual carrier. There was a modification many years ago that allowed the YRS-1 to detect "ISB" or independant sideband. You used a stereo headset and wired the lower sideband output to the left ear and upper sideband to the right ear. When the receiver was tuned, the signals seemed to pass thru your head! "Locked" on am AM signal, you could hear the selective fading on

the individual sidebands, the "carrier" apparantly being in the center of your head, if the audio gains were properly balanced! It was wierd to tune the set with this modification going, and very interesting! Some Shortwave Broadcast "feeder" transmissions would play one program on one sideband and something different on the other, all at the same time!

73,

E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, modified, traded & used!"
===NOTE NEW E-MAIL ADDRESS===
ebjr@worldcom.att.net
===NOTE NEW E-MAIL ADDRESS===
417 Ridgewoood Drive
Metairie, LA., 70001

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: "Pentti Haka" <pha@mikrolog.fi>
Subject: GRC-106A RX AGC problem
Message-ID: <MAILQUEUE-101.960917130905.448@osku.mikrolog.fi>

Hi BA gang!

I recently joined the list, and thought that some of you out there might be able to help me with my problem. I hope the GRC-106A qualifies as a boatanchor, it does have a few tubes and it is *heavy* :-)

I recently got this beast and fired it up. Everything else seems to work, but the RX AGC acts strange. Although I have never heard the GRC-106A in action and do not know what the RX should sound like, I cannot believe that this is what the designers meant.

The AGC system has two detectors: "normal" and "hang". The "normal" detector takes care of the AGC attack and has a long time constant RC network - i.e. has a very long decay time. The "hang" detector has a shorter time constant but 1.2 times larger voltage. When the signal is removed, the AGC voltage should hang at a steady level and the drop rapidly as the "hang" voltage crosses the "normal" voltage and the discharge transistor starts to conduct. According to the technical manual, the hang time should be long enough so that the AGC voltage stays at a nearly constant level between words in normal speech.

In my unit, the AGC attack time is too long, about 20-30 milliseconds, which causes severe distortion when a signal is first applied. The decay time is very short, the RX gain pumps badly even between

syllables and the S-meter jumps up and down rapidly. The attack time being too long, this also causes constant distortion. There's no sign of a proper "hang" type AGC operation, and SSB signals are very difficult to read.

I measured various points in the AGC system with a scope. The AGC IF amplifier works correctly, and the AGC detectors get an IF voltage of about 4 volts RMS. With full input signal, the "normal" detector produces about 3 volts DC across it's 22uF time constant capacitor. However, at this capacitor, the risetime with a "step" input signal is quite long (30 milliseconds).
The "hang" detector also works correctly and produces about 4 volts DC to its time constant capacitor. The "hang" discharge transistor is also ok.

When I increase the signal at the receiver's input and measure the AGC voltage at the "IF AGC" test point, it rises linearly to about 2 volts and stays there ("saturates") when the signal level is further increased, i.e. the AGC system
only steps in at this voltage and starts to regulate the gain heavily. When the signal is removed, the voltage at the "IF AGC" test point drops slowly from 2 volts to zero - there certainly is a long enough time constant at this point. However, since an AGC voltage below 2 volts does not seem to affect the gain very much, the slow decay is not reflected in the receiver's actual gain. When the AGC is in action, the AGC voltage level is almost constant at 2 volts, and the time constant capacitor has no chance to affect the RX gain decay time - at a nearly constant voltage, the cap just "isn't there".

So the AGC system seems very non-linear: from 0 to 2 volts, the AGC voltage does not affect the gain much, then the AGC steps in very heavily and the AGC voltage cannot rise above 2 volts. When looking at the schematic, this seems natural, since there are two diodes and a transistor in series with the IF AGC DC path, which will produce a treshold of about 2 volts.

I cannot find a faulty component anywhere - it just looks like a bad design. This I cannot believe, the US Army would not have accepted radios that produce unintelligible audio :-)

I have checked the IF gain regulating element (a shunt transistor and a negative feedback element) and they seem to work correctly, i.e. they produce a 40 dB variation in the IF gain, as promised in the manual. Same goes for the RF AGC: the delayed RF AGC voltage gets to the RF tube's grids and varies their gain as it should.

There are two pots to adjust the IF and RF AGC gain, but I can not find any combination of these that would produce any improvement. The AGC treshold voltage can be varied somewhat with these pots, but the

end result is just about the same.

So my questions are:
- has anybody operated a GRC-106A? How should the AGC actually work?
- has anybody had a similar problem?
- any suggestions?

Hoping to solve this soon, the radio is all spread out on the living room
floor and the XYL is leaving.

73
Pentti Haka, OH2TC

------- Pentti Haka ---------
-- Pentti.Haka@Mikrolog.fi --

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
Subject: hallicrafters SX101A - $75 - D.C. area

Hallicrafters SX-101A
Prefer pick-up in D.C. area (this is no light radio)
$75

Dr. Electrode
a.k.a. Larry Wolken N3OJD
voice   (202) 291-9303

------ Forwarded message ends here ------

* *
* NOTE: The message above is a re-post from the newsgroup rec.radio.swap. *
*   All replies *must* go to the person making the post, not me.   *
* *

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Bob Rolfness <rsrolfne@atnet.net>
Subject: Heath VTVM
Message-ID: <323E19FC.29CA@atnet.net>

Greetings All --

Just came into a very nice clean Heath model IM 5228 VTVM. Seems to work, but am unable to completely test it as I don't have the plug in probe. Also am missing the manual.

Does anyone have a manual for sale? Or could make a copy of the electrical section, I'd be glad to pay expenses. Maybe I could get the drawing for the probe and construct a copy.

Anyone having a probe from a parts unit would be too much to ask.

Thanks to All.....

73's Bob W7VZX

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: lkayser@rideau.net (Larry Kayser)
Subject: Help please, B119 set.
Message-ID: <199609180031.UAA25904@mail.peterboro.net>

Greetings:

Part 1

Today I visited the Signals Museum at Kingston, Ontario. I found a b119 set on display. This hf set is composed of four cast metal boxes, transmitter, receiver, power supply, spare parts. The set has cast aluminum lids. There was no other information available on the set at this time.

Part 2

When I looked at the GRC-109 radio I have and studied the design I could easily see were the design of the radio was not the usual military radio effort of the period, post WW II. Today when I saw the b119 set, I had a very strong feeling that I was looking at the precursor to the RS-1 / GRC-109. What I want to know is more about the b119 set, where did it come from, who used it, when did they use it, how many were made etc. Are there any of these radios around in the world?

Anyone who can help with information will be appreciated.

Larry

va3lk / wa3zia

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Tom Kelly <tjkelly@apk.net>
Subject: Help with R-390A Diagnosis
Message-ID: <323E0592.2CBC@apk.net>

Greetings,

I have an interesting problem with my R-390A: greatly reduced sensitivity on the 00 MC band (550 - 2000) but apparent normal operation on the 01 mc band. Local bc stations are barely heard on the 00 band but come in well on the 01 band. Since this just happened (it had been operating normally), I presume that this is not an alignment problem but the failure of a component.

Can anyone offer me any pointers or suggestions?

Thanks,

Tom
--

Tom Kelly
Novelty, Ohio

mailto:tjkelly@apk.net

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Hi!
Message-ID: <Pine.SUN.3.91.960917063626.13994C-100000@indy1>

Hi, all!

   ...Just a quick note: got to Quincy IL all right, enjoying class (remember, all of us, including the instructors, were pushin' boatanchor TV rigs until *real* recently! Not to mention all the FM BC tube-final rigs sitting around the place....) and etc.

   Alas, I had to work 13 hours the day before leaving--we were having "staticats" put on the tower, odd pointy static-drain gadgets (balloon traps!) and nothing would do but me being there to snoopervise the process. So I packed hurriedly.

Did take two receivers, the '37 Huntoon two-tuber and a (sand-based) DC receiver built in 1930s style, plug-in coils and all. Seem to be a lot of sigs--should have brought a transmitter after all! (Of course if I had, there wouldn't've been, right?)

Haven't found any true BAs--but may yet!

73,
--Bobbi

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Neal McEwen <nmcewen@metronet.com>
Subject: Re: HISTORY OF TUBES
Message-ID: <323F4326.570A@metronet.com>

JOHN_SEHRING.parti@ecunet.org wrote:

> In the August 1996 issue of `Stereophile' magazine (pp. 23-270, there's a long, very interesting letter on the history of tube design & manufacture by Bell & Western Electric. Although it (naturally) focusses somewhat on audio tubes, it's nonetheless interesting esp. the early work.

Tube lovers and collectors should not be without "Saga of the Vacuum Tube", by Gerald Tyne and "70 Years of Radio Tubes and Valves", by John Stokes. Both trade the history of the tube from Edison's patent on the Edison effect to DeForest and Fleming to modern tubes. Both are a 'good read' as Larry King would say. Many, Many fine photos in Stoke's book. Both volumes are still available I think.

--
73 de K5RW, Neal McEwen nmcewen@metronet.com - Richardson, TX (Dallas)
WWW Page for Telegraph Key Collectors and Historians
http://fohnix.metronet.com/~nmcewen/ref.html

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Re: homebrew plate choke --- Most Definitely!
Message-ID: <9609171554.AA105402@csemail.cropsci.ncsu.edu>

> On Mon, 16 Sep 1996, Bruce Robertson wrote:
>
> > My h/b projects are stalled by the apparent lack of plate chokes in the
> > surplus stores around here.

etc....

> > So, can I make one myself? Just take 100' of enamel wire and turn until
> > I'm blue in the face? Any ideas? I figure the amidon ferrite cores won't
> > take the voltage, or could I go that route?

Yes, RF chokes are quite simple to make, especially for single band use.
There is nothing particularly magic about them, from the practical side.
If you are going to cover a 10:1 frequency range, you need to be a bit
more careful because of self-resonance with stray capacities.

First Glowbuggite Hartleyitis Parallelfeedsii Rule of Thumb for Plate Chokes:

Long, Long ago, in times far past.... it was proper to build your own
RF chokes, roughly as follows.

1. Take of any goodly thin wire, perhaps of no. 26 through no. 30, of
   sufficient circular mils to handly pass your firebottle plate current
   with a margin factor of two or three, a sufficient quantity to winde
   forth upon a bobbin of wood/glass/plastic/teflon/isolantite/steatite
   or other such matierial relatively impervious to RF effects etc.,
   approximately 300 turns upon a 1 inch form, single-layer solenoid or
   scramble wound (it matters not at the usual lower BA QRG). This be
   a fine plate choke for 200 meters and down (it also works just fine
   on 160/80/40m usually). The form is not particularly important,
   common wooden or plastic thread spools will serve nicely. Some are
   enamored with single-layer windings wound on glass tooth-brush cases,
   or chemistry test tubes, or a plain wooden dowel occasionally coated
   with shellac or dipped in paraffin wax. Single-layer types can be
   easily fitted with fuse clips and changed for each desired band.

2. Screw or mount appropriately upon your breadboard, for the care and
   proper feeding of your 7.5 or 50 watter (or 250 watter for the well
   heeled amongst us).

Ref.: C.f. Amateur Radio Handbook, 3rd Edition, 1928, American Radio
       Relay League, Hartford, Ct., in the chapter on building radio
       transmitters.

> There are probably others with better insite as to the way to make RF
> chokes, but I will relate some things I ran into. First of all, don't
> use ferrite of any kind for transmitting chokes. I tried that - it looked
> attractive to really increase the inductance without having to wind so
> many turns. I had one with a ferrite rod explode - luckily it was
> enclosed. Be sure it is not series resonant on any frequency of interest.

Never had the ferrite bomb experience. I was thinking of trying one or two

of iron nails, not too much, but sufficient to drop the inductance a bit. In the old days, the bobbin style chokes were screwed to the baseboard, so if anything, the nail/screw would add some inductance. Perhaps the ferrite absorbed too much RF and the chemical composition/structure of the particles would heat to melting/burning/decomposing status (Barry Ornitz may be the one with the insight here).

Testing for series resonance is a good thing to do, especially at high power. This is very important. It will burn nicely if it resonates and dissipates an RF load. For a 10:1 frequency range, this should be checked rather carefully, especially with the WARC bands making all our bands rather close together, actually. If you are building a one or two band affair, it really does not matter, much, and I would estimate that somewhere around 10 times or more as much inductance as is used in the tank circuit should be plenty. How it is wound is of lesser importance than is a sufficiency of turns of wire.

2. For the higher bands of 20, 10, or 5 meters, you can adjust the turns appropriately, to perhaps 150 for 20 meters, 100 for 10 meters and 50 or so for 5 meters. Alternatively, you can pie wind the choke, in chunks appropriate to prevent series resonance at any particular band. Design for this may be rather complicated, theoretically, and rather complex by the cut and try method, but you can observe any good form of commercial kilowatt choke, like one of the big Johnson or National chokes, and see how they are wound, for the size of the pies, relative spacing, etc. There was an article in QST somewhere in the 50's about winding plate chokes for linear amplifiers that covers a lot of this, if my memory is not too flaky. Others aboard can fill you in on the theoretical particulars, since I be a mainly seat-o'-de-pants sort of Rules de Thumb fellow.

> Check this by shorting the choke with a clip lead and use a grid dipper.
> If it resonates in any band you will use, it won't work on that band.

Definitely, a glowbottle grid dipper, no less! Nay to one o' them thar non-self-heating thingies!

> E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI

I would like to hear other's experiences in making such parts, from scratch. That is half the fun of amateur radio, especially BA/GB style!

73/ZUT DE NA4G/Bob

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Jeffrey Herman <jherman@hawaii.edu>

Subject: Re: homebrew plate choke --- Most Definitely!
Message-ID: <Pine.GSO.3.93.960917075033.12897A-100000@uhunix5>

The actual winding of the bobbin can be facilitated by using a
hand drill. Determine the gear ratio (how many turns of the
bobbin for each rotation of the hand wheel), mount the drill
in a vise, one hand turns the hand wheel (counting each turn)
and the other hand keeps some tension on the wire as its wound
on the bobbin. It'll look quite professional when done!

Jeff KH2PZ / KH6

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Re: homebrew plate choke --- Most Definitely!
Message-ID: <9609171836.AA105616@csemail.cropsci.ncsu.edu>

> The actual winding of the bobbin can be facilitated by using a
> hand drill. Determine the gear ratio (how many turns of the
> bobbin for each rotation of the hand wheel), mount the drill
> in a vise, one hand turns the hand wheel (counting each turn)
> and the other hand keeps some tension on the wire as its wound
> on the bobbin. It'll look quite professional when done!
>
> Jeff KH2PZ / KH6

I have always seen the hand drill method in the handbooks, c.f.
1928 or 1935 ARRL handbooks, but was such as klutz at it, I
generally opt for a slow motor drill.   My fist wig/wags a bug
or a Kootie key better than the rotary motion needed for a hand
drill.....(:+\\.....

Thought for discussionary food de building de rigs:

    Why not take an old cheap Zebco spincasting reel and fabricate
    a wooden or plastic spool holder (or spindle of some sort) and
    wind the choke with something like the geared offset winding
    mechanism of such a device. It mimics to some extent the old
    fashioned Coto Coil Winders. It should be just the use for an
    old fishing reel.....hmmmmmmm.......

    ..... then rig up a Veeder-Root counter on the handle for the
    turns indicator.....hmmmmmmm.......

73/ZUT DE NA4G/Bob UP

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: "E.V. Sandy Blaize" <ebjr@worldnet.att.net>
Subject: Re: homebrew plate choke --- Most Definitely!
Message-ID: <19960917182738.AAB16802@LOCALNAME>

At 05:55 PM 9/17/96 +0000, you wrote:
>The actual winding of the bobbin can be facilitated by using a
>hand drill. Determine the gear ratio (how many turns of the
>bobbin for each rotation of the hand wheel), mount the drill
>in a vise, one hand turns the hand wheel (counting each turn)
>and the other hand keeps some tension on the wire as its wound
>on the bobbin. It'll look quite professional when done!
>
>Jeff KH2PZ / KH6
>
>   I have used 1/2", 3/4" and 1" ordinary wooden dowels, wound with #30 or #28 wire. Also have gotten VERY good results with #26 cotten covered enamelled wire from AES. I drill holes thru the dowels at the end of the windings and use lengths of #14 wire for terminals. Mopunting is taken care of by drilling the end and tapping with an 8-32 tap or a sheet metal screw. Lots better than trying to find the multi-pie National chokes at outrageous prices now (IF you can find them!) I usually wind them by "hand". Tedious!
73
E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, modified, traded & used!"
===NOTE NEW E-MAIL ADDRESS===
ebjr@worldcom.att.net
===NOTE NEW E-MAIL ADDRESS===
417 Ridgewoood Drive
Metairie, LA., 70001

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: ks0f@i1.net (MIKE SANDERS)
Subject: HRO coils wanted
Message-ID: <199609172304.SAA17197@mail1.i1.net>

Greetings All,
       The original HRO I got is lacking coils. I could use an A, C and D coil for it. Also still need an A coil for the HRO50T1 I have. Will buy outright or maybe trade. I am still looking for a couple handbooks. ARRL for 1943 and 1956. Any help appreciated.   73, Mike

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: TEKOCH@aol.com
Subject: Knobs for DX-100
Message-ID: <960917011026_310273001@emout20.mail.aol.com>

I came home from the Prater's Mill hamfest with two DX-100s. One is now alive and well, the other needs work. Although they have the original knobs the stacked knobs for the xtal switch (gray skirted), grid drive (small red), course (gray skirted) and fine loading (red) controls are cracked and my attempts to repair them are not very successful. I am also missing the skirted knob for the meter switch. Does anyone have these in their parts box. If so let me know of their availability and price.

Tom Koch - W4UOC
8170 Habersham Waters Road
Dunwoody, GA 30350
tekoch@aol.com

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: aa4rm%amos@mathcs.emory.edu (AA4RM's)
Subject: Re: Knobs for DX-100
Message-ID: <9609171238.AA07485@amos>

Tom, I hate to r3eply to you and simultaneously hose the reflector but...

You can banfd ther knobs with pianner wahr & it's almost unnoticeable.
Or you can get the red knobs per some Prater lad's suggestion by glomming them from an unwanted piece 'o Tektronix eqpt.

OKOKOKOKOKOKOKOKOKOKOK Hank V-C... all Tektronix is wanted. I mean 'borrow the red knobs... from a disused'

  M

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: "Paul Bock" <pauboc@smtplink.pulse.com>
Subject: Knurled nuts for bug binding posts
Message-ID: <9608178429.AA842990048@smtplink.pulse.com>

BA Buddies,

I have located a source of nickel-plated, open-end, 8-32 knurled nuts suitable for use on the binding posts of older bugs. They are *NOT* exact duplicates of the originals used on the Vibroplex line, as they are slightly taller and have straight vertical knurling instead of

the diamond knurling on the original nuts. However, they are the correct shape and style and look fine when installed (i.e., not "out of place"). If you have an older bug which is missing the nuts, these at least will make the bug look more "complete" and are just different enough that they will never be mistaken for "original." BTW, this is pretty shiny nickel plating, but it *IS* nickel.

I have a few of these which I'll let go if someone needs, say, one or two pair; for quantities, e-mail me for the source address & telephone number. They're not expensive and the source doesn't charge any shipping, but there is a $15 minimum order requirement.

Paul, K4MSG

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Terry Gaiser <gaiser@lightspeed.net>
Subject: KWM-2 FS
Message-ID: <323E180C.253C@bak2.lightspeed.net>

I have a nice representation of an original KWM-2. It is winged of course...10K serial number, has plain tuning knob (no finger hole). This radio I think is dated around 1961-1962. For its age it is in nice condition but the case and the style ring has a few scratches here and there, the front pannel and knobs are in excellant condition...radio works good. I have a PM-2 supply with it that has an extention cable for remoting the supply. $ 400.00 shipped or best resonable offer.
Thank You,
Terry - N6UR

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Spencer Petri <spetri@e-tex.com>
Subject: Lacing cord and other STUFF.
Message-ID: <m0v34hl-0002DYC@e-tex.com>

Received my fall 1996 catalog from C and H sales company, 2176 E. Colorado Blvd, Pasadena,CA 91107, Ph # 800-325-9465. Lacing cord is listed (black and white) at 500 yard spool for $7.95. Lots of other useful goodies. Neat BA STUFF.

73 de Pete WA5JCI

"no connection to nothing"

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: KA9EGW@aol.com
Subject: Re: Last call: BAs off market
Message-ID: <960916192900_286328497@emout06.mail.aol.com>

Having gotten the financial wolf off my doorstep, I can afford to keep the unsold remainder of my toys, which is what I'm gonna do. Many thanks to all who responded to my posts.
73, Brian KA9EGW

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: john <johnmb@mindspring.com>
Subject: Lysco information wanted
Message-ID: <2.2.16.19960917183403.2b47cf14@pop.ral.mindspring.com>

Does anyone have any information about the Lysco Bandmaster series? I seem to remember a QST article some years ago, that had it as a topic of discussion regarding the Classic Exchange, or the like. Can anyone cite the issue, or better yet provide a copy, if I provide a SASE?

I'd welcome any more information on this series of rigs, as I just purchased a Bandmaster 600. Any firsthand or anecdotal information appreciated.

73/john

PS: Hurricane Fran was a mess, but having only wire antennas CAN be a blessing!

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "E.V. Sandy Blaize" <ebjr@worldnet.att.net>
Subject: Re: MAGNET WIRE
Message-ID: <19960917005145.AAB2711@LOCALNAME>

At 08:05 PM 9/16/96 +0000, you wrote:
>To: boatanchors@theporch.com
>
>Why/what is the `magnet' in magnet wire?
>
> -John Sehring (09/16/96 9:25 am MT @Baker, Montana) UCC wb2eqg
>
        'Cause it was first used for winding electromagnets and electromagnetic things like motors and transformers.....before the radio and tubes came along.

Usually "magnet" wire is solid wire that has an enamelled coating on it.
        Like what we used to call:"bell wire" when we wre kids back in the 40's.
"Bell wire" is single or double cotton covered wire, sometimes enamelled as
well but usually not. The cotton insulation is paraffin dipped. It came in
small rolls at any hardware store and was used to hookup low voltage
"doorbell" circuits. It was popular for winding coils for crystal sets,
receivers, and
small transmitters, was cheap, and usually #18 sometimes #20 guage.
        Many a roll of "bell wire" didn't get used for anything close to
wiring up doorbells, but it was still "bell wire".
73
E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, modified, traded & used!"
===NOTE NEW E-MAIL ADDRESS===
ebjr@worldcom.att.net
===NOTE NEW E-MAIL ADDRESS===
417 Ridgewoood Drive
Metairie, LA., 70001

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Neal McEwen <nmcewen@metronet.com>
Subject: Re: MAGNET WIRE
Message-ID: <323E0A55.6447@metronet.com>

E.V. Sandy Blaize wrote:

> "Bell wire" is single or double cotton covered wire, sometimes enamelled as
> well but usually not. The cotton insulation is paraffin dipped. It came in
> small rolls at any hardware store and was used to hookup low voltage
> "doorbell" circuits.

   Cotton covered wire was first used by ladies hat makers. In the first
half of the 19th century telegraph sounder, relay and register solenoids were
made from hat makers wire.   The hat makers used the wire to give shape to
the hats. It was easily bent to large shapes.   I wonder how long we would
have waited for good electromagnets if the hat makers had not been around?
--
73 de K5RW, Neal McEwen nmcewen@metronet.com - Richardson, TX (Dallas)
             WWW Page for Telegraph Key Collectors and Historians
              http://fohnix.metronet.com/~nmcewen/ref.html

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Stanley Siegel <SIEGELS@turing.law.nyu.edu>
Subject: Magnet Wire
Message-ID: <s23e9370.001@turing.law.nyu.edu>

I'm no expert on wires, etc., but I am fairly certain that "magnet wire" got its name from the fact that it is usable -- and was used -- to wrap the coils of electromagnets. It is normally a medium to fine gauge copper wire, coated only with varnish for insulation. Not an easy job to solder, since you have to scrape off the varnish to get a good bond. Normally, magnet wire would be used also for the windings in transformers.

Stan,   W6TJS

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: wb7vdn@ro.com (Ron Lamb)
Subject: Manual F/HP-202CD
Message-ID: <199609171816.NAA15693@sh1.ro.com>

Hello All;

        I remember a query on the list for a manual for the HP 202CD Wide Range Oscillator. I don't have the original message but I have a copy of the maintenance TM 11-6625-1537-15 for the version the Army bought.

It consists of 28 .TIF format files. I can E-mail it to whom ever requested it.

Ron Lamb
WB7VDN

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Allan Fritsche" <fritsche@msn.com>
Subject: Manual for the 6N2 VFO
Message-ID: <UPMAIL03.199609162321290981@msn.com>

Hi Gang , had some responses fpor a copy of the manual for the 6N2 VFO. It is the kit manual and I will make a copy before sending to new owner. I can't find all of the e-mail id's to answer individually so please resend direct to me again.
Thanks Al
fritsche@msn.com

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: JOHN_SEHRING.parti@ecunet.org

Subject: MEASURE CABLE LOSS
Message-ID: <9609171430.aa06414@pcusa01.ecunet.org>

Ah yes, there is a mistake in my Measure cable loss & also typos.
Sorry. Here's better:

You can check for coax cable loss with nothing more than a transmitter, an SWR bridge and a resistive dummy load whose impedance equals that of the cable to be tested.

Run the test on the frequency you are interested in using the cable on.
Connect: Tranmitter, bridge, cable, and dummy load, in that order.

Tune up to get a full scale reading in the forward mode of bridge and/or adjust cal of bridge. (Use as much power as you reasonably can here as the usual SWR bridge is rather non-linear (due to diode characteristics) at lower power levels. You can also repeat the test at different power levels.)

Then, move the bridge to far end of cable, between the cable and dummy load.

DO NOT touch anything on the transmitter or bridge calibration control at this time!

Key the transmitter. Note new reading--it will be less than before due to the cable loss. Square ratio of readings & convert to dB by taking log of ratio & multiplying it by 10. <<<- mistake, was 20 before!

 -John Sehring (09/17/96 12:06 pm MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: MEASURE CABLE LOSS
Message-ID: <9609171515.aa05346@pcusa01.ecunet.org>

Ah yes, there is a mistake in my Measure cable loss & also typos.
Sorry. Here's better:

You can check for coax cable loss with nothing more than a transmitter, an SWR bridge, and a resistive dummy load whose impedance equals that of the cable to be tested.

Run the test on the frequency you are interested in using the cable on.
Connect: transmitter, bridge, cable, and dummy load, in that order.

Tune up to get a full scale reading in the forward mode of bridge and/or adjust cal of bridge. (Use as much power as you reasonably can here as the usual SWR bridge is rather non-linear (due to diode characteristics) at lower power levels. You can also repeat the test at different power levels.)

Then, move the bridge to far end of cable, between the cable and dummy load.

DO NOT touch anything on the transmitter or bridge calibration control at this time!

Key the transmitter. Note new reading--it will be less than before due to the cable loss. Square ratio of readings & convert to dB by taking log of ratio & multiplying it by 10. <<<- mistake, was 20 before!

 -John Sehring (09/17/96 12:06 pm MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Barry L. Ornitz" <u856010@eastman.com>
Subject: Measurement of Cathode Interface
Message-ID: <Pine.ULT.3.91.960916195300.15048A-100000@dua150.kpt.emn.com>

On Fri, 13 Sep 1996, Fred Powell asked about the cause of cathode interface in indirectly heated cathodes and methods to measure it.

> Stan Griffith's book describes how to check for cathode interface in the
> vertical amplifier by using an 84 test plugin for the scope and plugging
> the 82 into a known good scope. (I might try this at Stan's shop in Oregon
> the next time I visit Portland). Are there any other ways to test for it?

Without a special test rig, there are no simple ways to measure it. Building such a rig is not particularly difficult.

> Just what is cathode interface and what is the mechanism that "wears-out"
> a cathode?

I believe John Shriver gave a good explanation of this. In the most simplistic of terms, imagine if someone inserted a parallel combination of a resistor and capacitor in series with the tube's cathode. At high frequencies, the capacitor passes AC signals and the resistance has minimal effect. At low frequencies, and especially DC, the capacitive reactance acts as if it is not there and the added resistance _does_ affect circuit operation. What many folks probably do not know are the effective values of this resistance and capacitance. The resistance is typically a few ohms. This seems small but compare it to the tube's

dynamic small signal resistance which is the reciprocal of the transconductance. With a typical transconductance of 10,000 micromhos (0.01 S), the dynamic small signal resistance is 1/gm=100 ohms. A few ohms can easily give a few percent distortion (and overshoot when supplied with a sharp-edged square ware). The capacitance is typically in the order of a nanofarad to perhaps 0.01 microfarad. The time constant of the cathode interface, i.e. the RC product, can be anywhere from several nanoseconds to a tenth of a microsecond.

> Is there a simple bench test rig that could test single 7788, 6dj8, or
> whatever tube for cathode interface? This beast has six dozen tubes in it
> total and at least a dozen in the vertical amplifier so I'm unsure if
> plugging one in at a time will indicate anything.

Stan Griffiths, W7NI, said:
> I am not aware of any test fixture that allows you to test a single tube
> for cathode interface.
..
> There was a very good article on this a couple of years ago in Electric
> Radio. I wish I could remember the exact issue. I can't remember the
> name of the author right now either, but Barry probably knows who it is
> and when the article was published. Are you listening, Barry? Can you
> tell us?

I am probably not the Barry that Stan is asking here, but... :-)

Tek actually made several experimental test fixtures to do just this. In an article by J. J. Gard Jr. and W. Collier, two such fixtures are described. (Advances in Electron Tube Techniques - Vol. 2). The first is just a simple long-tail biased triode amplifier fed with a fast risetime square wave. The overshoot is measured with a fast oscilloscope. The second used a differential technique with one known-good tube feeding a differential input oscilloscope for testing pentodes. Evidently the ASTM once had a standard test for cathode interface (F300) but this test has long been deleted from ASTM's current procedures. There are only a few tests left in the ASTM standards that even relate to vacuum tubes any more. [I looked.] The article notes that if the cathode area of a tube is increased to give a higher gm, cathode interface problems are not aggravated. However reducing the grid-to-cathode spacing without increasing the cathode area can cause increased problems with cathode interface. Thus the worst problems should be with close-spaced frame grids and ultraminiature concentric constructions (Nuvistors).

I will be happy to make copies of this article for anyone who wishes - as long as they promise that the information will NOT get in the hands of audiophiles. Even tubes with the absolute worst case of cathode interface (time constants of 0.1 microseconds) are just fine for _audio_ applications. The amount of added distortion caused by cathode interface

becomes entirely negligible at audio compared to the other distortions found in tubes. I see no reason for audiophiles to scarf up tubes with no cathode interface when old scopes (at least those with 10 MHz bandwidth and up) need them. Perhaps if they cannot easily measure cathode interface, we can convince them not to scavenge old scopes for tubes. [I don't want to start a flame war with the tube audio crowd but facts are facts.]

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Neal McEwen <nmcewen@metronet.com>
Subject: mike plug for KWM-2 ?
Message-ID: <323F474A.5C@metronet.com>

I understand that there may be a special mic. plug required for the Collins KWM-2/2A transceiver. Is this true and if so, where can I get one? Or what is the part / model no. so I can go order one.

--
73 de K5RW, Neal McEwen nmcewen@metronet.com - Richardson, TX (Dallas)
WWW Page for Telegraph Key Collectors and Historians
http://fohnix.metronet.com/~nmcewen/ref.html

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Re: Need Info: Abbott Inst. TR-4 xcvr
Message-ID: <77689.ddillman@igc.apc.org>

On Mon, 16 Sep 1996 09:34:35 -0500 (CDT),
JOHN A. KING (WA1ABI) <JAK@SUD2.ED.RAY.COM> wrote:

> Here's one I've never seen before... any info at all greatly
> appreciated:
>
> Abbott Instruments "Ultra Short Wave Transmitter-Receiver",
> Model TR-4.

Greetings, John. The Abbott TR-4 was made during the war and is a 2-1/2 meter transceiver intended for WERS (War Emergency Radio Service), the only kind of transmitting available to hams for the duration, as far as I know. Check it out in the October 1942 issue of QST, the one with the GI using a BC-611 on the cover. A less charitable man than myself might say that his expression pretty much sums up the performance of the grandfather of the walkie-talkie.

By the way, for those who may be interested, the WERS frequency plan included 15 channels from 112.1 to 115.8Mc/s with letter designations from A through J and AA through EE. These were divided between district control centers, subcontrol centers and state guard. The frequencies were designated as "center frequencies", which may give some idea of the stability (and modulation characteristics!) of the transmitters used at the time.

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Jim Zellmer <zellmer@raccoon.com>
Subject: R-390A now residing in basement
Message-ID: <199609170352.WAA04666@slip1.raccoon.com>

A R-390A followed me home from the AKSABEN ham fest in Omaha last sunday. The radio is a Collins and seems to be in good working order. The front tag says "order no. 9719-55" and the SN is 210.

Now if I can find a set of power cables for the ART-13.....

73..

'73's

****
Jim Zellmer Email: zellmer@raccoon.com
639 40th Street Phone: 515-279-4911
Des Moines, IA 50312 HRC: ka0vsl
****

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: R-392 INTER- & CROSS-MOD
Message-ID: <9609171430.aa06399@pcusa01.ecunet.org>

Hearing BC station harmonics is ok if that's what they really are! You won't hear them unless you are fairly close to xmtr site, depends on tx power level too.

The FCC specs for harmonic suppression as of 9/85 was 43 + 10*log(power in watts) dB below the carrier or 80 dB, which is greater. For example, 50 kW station harmonics would have to be less than 500 microWatt.

The harmonics of some overseas AM bdcst stations are fun listen to in the range above 1600 KHz to about 3.3 MHz. Harmonics tend to sound quite distorted.

The SP-600 (and the R-392?) & many others (e.g. NC-183, -183D, SX-28, SX-88) use two RF amps. This seems to ensure cross- and inter-modulation! Later radios went to just one RF stage. More gain later on in the rx chain is better, cause there's progressively more selectivity there.

Some later minature tubes were especially good at resisting all this, the 6DC6 sharp-cutoff pentode (plug-in replacement for 6CB6 but watch the gain diff.) which both Collins and Halli used as RF (and IF) amps, and the 6BY6 pentagrid mixer (also good as a product detector).

 -John Sehring (09/17/96 11:19 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: R-392 INTER- & CROSS-MOD
Message-ID: <9609171515.aa05329@pcusa01.ecunet.org>

Hearing BC station harmonics is ok if that's what they really are! You won't hear them unless you are fairly close to xmtr site, depends on tx power level too.

The FCC spec for harmonic suppression as of 9/85 was: 43 + 10*log(power in watts) dB below the carrier or 80 dB, which is greater. For example, 50 kW station harmonics would have to be less than 500 microW.

The harmonics of some overseas AM bdcst stations are fun listen to in the range above 1600 KHz to about 3.3 MHz. Harmonics tend to sound quite distorted though.

The SP-600 (and the R-392?) & many others (e.g. NC-183, -183D, SX-28, SX-88) use two RF amps. This seems to ensure that cross- and inter-modulation will take place!

Later radios went to just one RF stage. More gain later on in the rx chain is better, because there's progressively more selectivity.

Some later minature tubes were especially good at resisting all this, the 6DC6 sharp-cutoff pentode (plug-in replacement for 6CB6 but watch the

gain diff.) which both Collins and Halli used as RF (and IF) amps, and the
6BY6 pentagrid mixer Halli used (also good as a product detector).

Are there any other candidates?

 -John Sehring (09/17/96 11:19 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: mknudsen@lucent.com
Subject: Re: R-392 INTER- & CROSS-MOD
Message-ID: <9609172305.AA05916@bock.ih.lucent.com>

Tnx fer the extra discussion. Wonder if some of the "tropical band"
stations I can barely copy at nite aren't really harmonics of Euro BC-banders?

Add the R390 (but not the -A) to the list of two-RF stagers,
also the SX-25 and -42, and most any HRO or HRO-style.

I'm surprised that no top-class RX used a passive tuned stage ahead
of the RF amp (ie, a 4-gang tuner but the 1st gang has no tube).
The old consumer BC Philco 90 used that setup, and I could copy
a Canadian station at 1010 out from under a local 1000 KC powerplant
w/out cross-mod.

Someone suggested taht on the BC bands, the SP-600 should switch out
its 1st RF amp tube and jsut put a small cap between where the grid
and plate would be.

I think the R390 and R392 were optimized for short whip antennas,
so raw sensitivity was more important than cross-mod.

Also the need for need for two RF amps went down with less noisy
mixer tubes, as you mentioned. 73, mike k aa9rg

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: knudsen@gvmail.ih.lucent.com
Subject: re: R-392 intermodulation -Reply
Message-ID: <9609162048.AA05056@bock.ih.lucent.com>

OK, tnx fer the clarification regarding cross-modulation.
My SP-600 really does exhibit some cross-mod on lower part
of BC band -- one station gets another's program added to it.

However, mostly it's just phantom "stations" appearing where no
station ought to be, usually with two programs (one from each
contributing real station).

Anyway, over all tube and sandy RX, effects I've noted
seem to fall into:

(1) Two AM BC stations adding up and trashing the 160m and Tropical bands.
(2) BC harmonics doing likewise.
(3) Difference of two AM BC stations in the LW bands
(4) Differences of two FM stations in the HF bands, especially
above 15 or 20 MC. Most RX get this to some extent.

And of course
(5) phatnom BC stations, probably 2x one station's freq minus 1x another's.

73, mike k aa9rg

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: aa4rm%amos@mathcs.emory.edu (AA4RM's)
Subject: R303/FRR - it's a Stromberg Carlson!
Message-ID: <9609162146.AA06465@amos>

So says the F Chesson directory from AWA. It's really a RX in the RBR-3a
package.

Has anyone ever seen one much less used one? Well I've just gazed on
SN 41 from Z&W mfgr. in Cleveland and... it seems to have worsened my
luck.

Again, any similar experiences?

I am curious surplus,

  Marty

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: wb6zwc@ns.net
Subject: rise time
Message-ID: <199609170425.VAA28463@tomcat.ns.net>

Thanks guys; got some real good explanations of rise time.

Now::::what is considered to the be upper limit of tube equipment in rise time.

Solid state equipment would seem to be limited only by the capacitance of the
P/N junction and I would expect the tubes would also find the capacitance the
limiting factor... tubes are larger, therefore, would not be able to provide

rise times above a certain frequency.

Is that about correct?
==========

Richard@Sacramento,Ca.

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: "Arnoud van der Wel" <a.p.vanderwel@student.utwente.nl>
Subject: Re: rise time
Message-ID: <199609171028.AA21766@driene.student.utwente.nl>

Richard wrote:

> Thanks guys; got some real good explanations of rise time.
>
> Now::::what is considered to the be upper limit of tube equipment in rise time.

Lets bend this question around to tube oscilloscopes. The distributed amp in my Tek 585A has a risetime of 3.7 nS. The bandwidth of this scope is (depending on which manual you believe) about 80-100 MHz (-3dB).

Now: Is this the fastest tube scope ever made? I think the 585A qualifies as a tube scope (even though some sand may be found in it if you look hard...) I know there were faster scopes like the 1GHz Tek 519, but does this thing have a tube vertical amp? What about HP? Who made the fastest tube scope? how was it done?

Interested,

Arnoud van der Wel.
****
Arnoud van der Wel Tel: +31-53-4895030
Calslaan 14B-43 Email: a.p.vanderwel@student.utwente.nl
7522 MB Enschede
The Netherlands
****

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: John Shriver <jas@shiva.com>
Subject: Re: rise time
Message-ID: <199609171457.KAA20924@shiva-dev.shiva.com>

While the Tek 585A is rated at around 85 MHz, it's hybrid. Tubes and

transistors, plenty of the latter in the 82 plugin. Maybe the 80 plugin was all-tube, it too is 85 MHz.

Not sure if there are any transitors in the 585A mainframe. The vertical amp is all tube, so maybe that's good enough. But I suspect transistors in the trigger circuit -- and there definitely is a tunnel diode, so that makes it hybrid. (There's no tunnel diode in the 585, but it can't trigger over ~50 MHz.)

The 545 was all-tube. With a K plugin, you have pure tube for about 35 MHz. (The 1A1 is most definitely hybrid, it even has PC boards!)

The 545 had a door on the side so you could connect directly to the vertical deflection plates for more bandwidth.

By the 547, the vertical amp has TO-3 power transistors in it!

Yeah, the 518 is probably pure tube, when it works. Not a general purpose scope, not much in the way of a vertical amp. Got the bandwidth by having little gain.

HP's competition to the 585A was the 175. It's pure tube, roughly the same bandwidth, lousy triggering.

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: rise time
Message-ID: <199609171833.NAA23253@netcom5.netcom.com>

As wb6zwc@ns.net discourses
>
> What is considered to be a fast rise time for a square wave?
>
> What about an average boatanchor scope? Does fast rise time cost
> lots more? Is it valuable to have very fast rise on square waves or
> is this a comment on the whole scope;ie. fast rise time on a generated
> square waves equates to a high quality scope.
> ==================================

Pulse and squarewave testing and specifications are a quick way of testing:
1. flatness of response from DC (or near DC) to "some high frequency. A pulse has primarily high-frequency components. A square wave has both high and low frequency components. The objective is to use a signal that has many terms in its frequency spectrum, generally represented as a Fourier series of frequencies.
2. Constant time delay through the signal chain. If some frequencies

are delayed more than others, a pulse rise and a following square wave DC level input won't have these characteristics in the output. One very standard circuit found in Tek scopes is the cathode-coupled (or emitter-coupled) paraphase with RC networks in the cathode/emitter coupling to give leading current boost at some frequencies, giving constant delay in time through the amplifier. Note that this is not constant phase shift, which is a time delay that varies as a function of frequency. What you want for signal fidelity (and this is true of hifi audio as well) is expressed by "the music goes down and round and it comes out here." You want to have the same music as you put in one end come out the other some time later.

The relationship between bandwidth and risetime is that bandwidth, in cycles per second, multiplied by risetime, in seconds, is 0.35. The risetime of a step function is measured between the 10% and 90% points, and should appear as an S curve symmetrical about the 50% point. The amount of curliness in the S is an indicator of the rate of frequency response rolloff (expressed in db/octave). The amount of assymetry points to several things---unequal delay, "dribble up" (an RC curve superimposed on the response), and other little nasties. Overshoot and ringing (oscillation) on a square wave flat top point to over-peaked high frequency response---i.e. the coefficient of the Fourier term is higher than 1/harmonic.

Typical risetimes on Tek scopes: 533A (later type 530 amp) 23 nsec 545A with K, 11 nsec. 547 with 1A1 7.5 nsec. There was a lot of hassle about what a 585 would actually do----with an 82 and a P6006 probe, expect around 5 nsec, maybe a little better. Tek and Dumont scopes properly tweaked will give very clean response in terms of risetime. Some of the others---well, it's a bit of Kentucky Windage to tell what they're doing when being hit with a fast-rise square wave.

So far as computer logic goes, most of the modern stuff I've looked at will rise and fall at 1-2 nsec, depending on power in the input signal and output loading. 15 nsec access time typically means that 15 nsec after the select signal is completely true (90% of its rise) the output is stable on the output lines. There isn't a spec for what the signal looks like before that 15 nsec, and you can see some very interesting things if you examine digital logic for analog response (not commonly done, except by those of us who "have a need to know"). 74S TTL, CMOS, etc., is too fast for old scopes---you need risetime well under a nanosecond to look at them reliably. The answer in the 60's and 70's was sampling, but taking reliable measurements with a sampling scope is an art all its own.

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: dma@IslandNet.com (Jan Skirrow)

Subject: S-36 Musings
Message-ID: <m0v36Lu-000VtfC@comm.amtsgi.bc.ca>

Well, I'm just getting into (literally) the Hallicrafters S-36 I picked up recently. Some things I wonder about:

Why do people at swap meets say something is working when they must know it isn't? This baby, I was assured, had been run "just before we left for here." Now the answer didn't matter to me, and for the price it shouldn't have. I could see the set was clean and intact - so I wanted it. The guy who sold it to me is a well-known figure around here, so he can't expect anonymity to hide him!

I was also assured that no modifications had been made. Now, I could see that there were no extra holes in the front panel. But I could also see what looked suspiciously like an extra transformer of some kind bolted on the rear top edge of the chassis. It was hard to miss, because someone had done a nice job of cutting down one of the mounting flanges so the piece would fit between the edge of the rf compartment and the edge of the chassis. Also, only the other flange of the transformer actually fastened to anything. The modified flange kind of floated there. There was also an extra coil mounted inside, probably for the bfo, that looks to have been added, because of the careful scribe marks on the chassis for the mounting hole. The original owner has had this set for a long time - so he must've known what I could see in a couple of minutes of looking.

Strange!

The set does not work, but I'm puzzled as to why. The signal is there (or at least noise - haven't put a signal generator on it yet) through to the audio driver. The primary of the audio transformer is Ok, but nothing is coming out what are supposed to be the speaker terminals. The extra transformer seems likely to be a 600 ohm to 8 ohm domajig, and the wiring is very hard to trace, so I'm still not sure what changes have been made in the output circuits. I suspect I'm missing something obvious - like expecting the speaker output to be at the terminals marker "speaker."

This set looks more like late 30s or early 40s construction than the manufacture date of late forties. It has a large number of humungous .01, 600vdc black "molded mica" caps that are paper caps in disguise. One of them (in the popular line to ground spot) had exploded at some point, revealing the paper innards. Having now tested a few of them, it's obvious that they must all come out. Dang!

I wonder why Hallicrafters put such a fancy audio stage in? It's a pair of 6V6s in push-pull, with a tone control setup that would have been found only on the best BC receivers. What was this radio used for? The 600 ohm output and the manual title suggests military.

Does anyone have a manual? I have a booklet entitled a "Tabular list of Replacement Parts" that is like an engineering document for part procurement, but it does have a schematic. I wonder if there is a more comprehensive shop manual for it? This document was issued by "The Chief Signal Officer" and is dated 1943 - which may explain the construction techniques, and some critical differences in parts between the manual and the actual set.

One other odd feature of this radio is that the B+ is brought out to two big terminals on the rear chassis. Obviously pre-OSHA, they are uninsulated and deadly to someone like me who tries to avoid turning these old BAs more than necessary, and sticks hands around back without a thought! I will have to cover these up.

Still, it is a very nicely put together radio, with a lot of features I wouldn't have expected. I assume it was pretty secret when first made, because the acorn tube front end would have wowwed the "other side" during WWII.

Jan Skirrow, VE7DJX

dma@islandnet.com
Duncan, British Columbia

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: "Allan Fritsche" <fritsche@msn.com>
Subject: Sale of the 6N2- VFO
Message-ID: <UPMAIL03.19960916230433041 9@msn.com>

The unit is sold as far as I know. If it doesn't, I will contact all who responded.

Thanks
Al
fritsche@msn.com

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Bob Duckworth <rmd@ka4ybr.netmha.com>
Subject: SP200SX?
Message-ID: <199609170153.VAA11932@ka4ybr.netmha.com>

Dear Super-Pro afficianados,

Need PS help after confirming id of this RX.

I think an SP200SX showed up here today.
Cabinet says type RS serial number 32.
Chassis has 7686 stamped on the back.

At the risk of putting everyone to sleep.....

crystal selectivity | signal meter | Beat osc.

phasing | band switch | send/recv

bandwidth ltr main | sensitivity | bandspread | mod/CW | audio

This is what the front panel looks like. I left off the two windows
but main is on the left and BS on the right.

There was supposed to be a power supply with it but instead came a pair
of 40m transmitters in a 19" rack.
These are kinda neat. One is HB 2E26 link coupled out I'll
have to dig more later. Other is ARC5 with nice HB supply.

So, if you're still awake, I'll get to the point.

What's a power supply that matches this RX look like?
It is a 200SX, right?

73,

-bob
WB4MNF

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: bowes@ibm.net
Subject: SR-500 XFMR Data WTD
Message-ID: <9609172124.AA0063@localhost>

I am looking for the specs for a Chicago Standard transformer model SR-500. The unit has eight
terminals on the top and is about the size of an average 500 watt transformer.

Tom Bowes
KB8NDS
Still searching for the elusive DM-28Q and
a National speaker for my HRO-50T1.

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: aa4rm%amos@mathcs.emory.edu (AA4RM's)
Subject: Re: Steinberg's - Cincy
Message-ID: <9609171158.AA07435@amos>

I actually WORKED at Steinberg's Christmas of 1955 as a high school sophmore.
"St. X" was just blocks away. & Jim W8KGI was there as a senior.
He was the head man at the radio club and now regularly contributes to
Electric Radio

"Downstairs Electronics" (hifi, ham, gen'l electronics) were run by
Jules Burnette & his son Dale. A salesman there was Bob Hatterschied who's
Bandmaster (lookout MODSTEPH) I was allowed to use for a month.

Upstairs appliances had a ham named Ivo (Obersdorfer?), a great cheerful
fellow.

I have clear recall of early Hi Fi from '54 (my license yr.) from Stienbergs.
The McIntosh 50watt 2-chassis critters, the Brook amps. that were a huge
garden of triodes, etc. The EV Regencys, the RJ enclosures & Norelco
cheapie speakers, and on and on.

Jules & son Dale loved Millen stuff & there was a lot... shelf after shelf
of thise neat red, black-lettered boxes. National RXs such as the HRO60
were present (neighbor Sam Cirrin had one but I think he bought it fm
Universal Svc. in Columbus / '60 was nice compliment to his
p-p 250Ts & B&W butterfly-tuned final cum ladder-boom yagi in back on
fone pole). But these RXs were so pricey I had no impression - and the
works were buried unlike the Hi Fi amp's parts.

I can only guess that parts & hifi business had so outstripped ham jobs
by '57 that Jules & Dale were finally told to Look Out!... on their
ham advertising. Steinbergs survives today as a very large appliance
store. They're no longer in downtown Cincy but now are in Norwood, OH.

Marty

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: "David L. Thompson" <thompson@mindspring.com>

Subject: Re: Steinberg's - Cincy
Message-ID: <199609171531.LAA08046@itchy.mindspring.com>

At 08:11 AM 9/17/96 -0500, aa4rm%amos@mathcs.emory.edu wrote:
>
>I actually WORKED at Steinberg's Christmas of 1955 as a high school sophmore.
>"St. X" was just blocks away. & Jim W8KGI was there as a senior.
>He was the head man at the radio club and now regularly contributes to
>Electric Radio
>
>"Downstairs Electronics" (hifi, ham, gen'l electronics) were run by
>Jules Burnette & his son Dale. A salesman there was Bob Hatterschied who's
>Bandmaster (lookout MODSTEPH) I was allowed to use for a month.
>
>Upstairs appliances had a ham named Ivo (Obersdorfer?), a great cheerful
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>
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>garden of triodes, etc. The EV Regencys, the RJ enclosures & Norelco
>cheapie speakers, and on and on.
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>were present (neighbor Sam Cirrin had one but I think he bought it fm
>Universal Svc. in Columbus / '60 was nice compliment to his
>p-p 250Ts & B&W butterfly-tuned final cum ladder-boom yagi in back on
>fone pole). But these RXs were so pricey I had no impression - and the
>works were buried unlike the Hi Fi amp's parts.
>
>I can only guess that parts & hifi business had so outstripped ham jobs
>by '57 that Jules & Dale were finally told to Look Out!... on their
>ham advertising. Steinbergs survives today as a very large appliance
>store. They're no longer in downtown Cincy but now are in Norwood, OH.
>
>Marty
>

How many more stories of these old "radio stores' do we have on BA. If I had the time I would put together a book on these places...

I remember talking to Barry at Barry radio....Bill Slep, Bil harrison, Tenny Freck, Bob Henry, Jules and dale etc. now names of the past. Most of the new entrepreneurs are into software, computers, accessories etc... I did run across several companies tied together (by family?) in NNJ under the United name (UPC for tubes, United Page for parts..Bill W2ONV was part of this group).

Remember BAers if it were not for the dealers and manufacturers there would be little outside of military gear. Support your local dealer..he or she needs to eat and support a family, too.

Thanks marty for the Steinberg "Look Out" info!

Dave K4JRB
early SSB and mobile rigs

>

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: k9gdt@juno.com (George P Sieverson)
Subject: Re: Still looking for a mate (revisited)
Message-ID: <19960916.214853.3750.5.K9GDT@juno.com>

Greetings fellow thermionic emissives and emissivettes,

Thanks to all responded with information on the Collins 32W1. Looks like, I'll have better luck trying to find a KW-1, KWS-1, 100V, or 32V3. Let the search begin......

73 de K9GDT
****
George Sieverson
Barrington, IL
K9GDT@JUNO.COM
****

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: standard@pcs.mb.ca
Subject: SWAN SW-120 Questions
Message-ID: <199609171725.MAA09002@pcs.mb.ca>

I finally snagged a 120 (a local put it on the swap and shop) and after getting it home realize I have a winter project (another) on my hands. The serial number is 195-120 on the rig, with the 120 being struck twice to 195-020, I wonder which one is right? I have an article which is an ad placed by Swan looking for #2 rig manufactured, but the wording in the ad is a bit confussing, or the serial number scheme is wacky. It states that #1 was a 20m monobander built in Herbs garage with the serial number 001-020, and the 10th rig was a 40m monobander (140) serial number 010-040. Can anyone confirm the Swan serial number sequence? The power supply that came with it is unlabeled other than a Swan serial number sticker, which is

hardly readable but starts with FM-???? made in Japan. (2 m mobile supply?).

More to come.....

Gary Smith
VE4YH
standard@pcs.mb.ca

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: Terry Gaiser <gaiser@lightspeed.net>
Subject: Swans FS
Message-ID: <323E1978.320B@bak2.lightspeed.net>

Almost mint condition Swan 500CX / 117XC $ 250.00 shipped. Swan 350 /ps,
spkr $ 200.00 shipped.
Thank You,
Terry - N6UR

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: Dave Hutchison <djhutch@concentric.net>
Subject: SX-101 Parts unit or Cabinet needed
Message-ID: <323F21DE.459@concentric.net>

I am looking for either a junker SX-101 (any model) or just the cabinet
in reasonably fair condition.

Any and all help to find these items will be sincerely appreciated.

73's

Dave Hutchison KW9U

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: David Ross <ross@hypertools.com>
Subject: TRADE: 51S-1 manuals & MIL-HDBK-162B
Message-ID: <199609170513.WAA22710@desiree.teleport.com>

BA folks -

  I've got some extra manuals available for trade here:

 - Original Army Technical Manuals for the 51S-1
    -> TM 11-5820-526-12   Operator & Org. Maint. (looseleaf)
    -> TM 11-5820-526-35   DS, GS, & Depot Maint. (looseleaf)

-> TM 11-5820-526-35P Repair Parts & Special Tool Lists (bound)
These are for the R-1122/GR and the R-1433/GR, the 115 VAC
and 28VDC versions of the Collins 51S-1.
All three like new, 3/4 inch thick overall.

- Original MIL-HDBK-162B, "U.S. Radar Equipment", only Vol. 1,
(Vol. 1 is unclassified, Vol. 2 is classified). Covers FSNs
5840 & 5841, dated Dec. 15, 1973, over 3" thick.
Very nice shape, looseleaf with thick printed covers.

These books are available for trade. I'm looking for:
- Manuals for the RT-91/ARC-2, both Operation and Maintenance
- Manuals for the PRC-34 & PRC-36
- Manuals for the PRC-38
- Manuals for the PRC-71 & PRC-72

Please email me direct.

73
Dave Ross KA6EPI ross@hypertools.com

From boatanchors@theporch.com Tue Sep 17 00:17:58 1996
From: jproc@worldlinx.com
Subject: Tube Data
Message-ID: <Chameleon.4.01.2.960916204641.jproc@>

Dear BA'ers,

Does anyone have any specs on the following tube types:

6814
6088

I'm told that these are wire lead tubes with 1.25 volt filaments. At minimun,
I'm looking for type, plate voltage, plate current and dissipation, cathode
type (directly or indirectly heated) and any application info.

Regards,
~~~~~~~~~~~~~~~~~~~~~~~~~~
Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer
HMCS Haida, Toronto Ontario
~~~~~~~~~~~~~~~~~~~~~~~~~~

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Al Klase <alklase@prolog.net>
Subject: Re: Tube Data
Message-ID: <199609171245.IAA21838@ns1.ptd.net>

At 07:28 PM 9/16/96 -0500, Jerry Proc wrote:
>
>Does anyone have any specs on the following tube types:
>
>6814: Submin. med-mu triode, computer rated, heater 6.3V @ 150ma. mu = 29

>6088: [AKA CK522AX] submin. power pentode, fil. 1.25V @ 20ma, 1.2mW output
        made by GE and Raytheon

       The above info is quoted from my galley proof of Ludwell Sibley's new book "Tube Lore" as described in John Dilks' recent post.

73,
Al

Al Klase - N3FRQ
alklase@prolog.net
Flemington, NJ

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>
Subject: TUBES AGAIN
Message-ID: <960917112143_75121.100_IHV48-1@CompuServe.COM>

Well!
     Sure didn't take long to get rid of the 3TF7 tubes.   There are no more. I will get started on filling the orders ASAP. Please bear with me if I don't get all them out immediately.
        All requests up to this date, on the 16th have been filled. All the 5814A orders are also OK.

     The tuning eye is   gone, the 3TF7s are gone and the 6AZ8 never was there. AT least not 7 like I thought.
        I mentioned to a few members already that for the tubes in my first list, the ones with 5 groups of tubes that I offered for "set of 5 for $15.00? I will reduce the price of the other 4 groups to $10.00 for set of 5 also.

These were the:
6BA6/5749
5814A
6BE6/5750
6H6
6AH6.
In addition add the following at the reduced price of $12.00 for box of 5.
6AU6 WC (for the KWM-2A and 32S-3)
6U8 A (for the KWM-2A and 32S-3)
12AT7 (same as above)
5670 (for 51S-1)
Again, add shipping to the tube prices. $3.20 for 1 set, plus box and packing. Extra sets cost more so add $1.50 for each additional set. Got to get rid of more and exchange the money for more BA gear. (repairs and parts too)

Regards from Hawaii,
Raymond J. Cote

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Lynn Stolz <lstolz@tekelec.com>
Subject: Wanted: Schematic/manual for E.F. Johnson T-R Switch
Message-ID: <323EA28D.167EB0E7@tekelec.com>

Could someone who has the instruction manual or schematic for the E.F. Johnson Model 250-39 T-R Switch send me a copy? I'd gladly pay for duplication and postage.

Thanks,

Lynn Stolz, N8AJ

From boatanchors@theporch.com Tue Sep 17 19:34:51 1996
From: PGWH83A@prodigy.com (BOB FRIESS)
Subject: WTB 516F2 Power Supply
Message-ID: <199609171753.NAA18284@mime3.prodigy.com>

-- [From: Robert Friess * EMC.Ver #2.5.1] --

Hi Gang,

Anyone out there that has a spare Collins 516F2 power supply that they are willing to sell? Please state price and condition in return email.

73,

Bob, N6CM

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: WTB: TCS-14 Transmitter
Message-ID: <Pine.OSF.3.91.960917092908.9408D-100000@Joyce-Perkins.tenet.edu>

Want TCS-14 transmitter in like new condition to go with my -14 receiver
for collection of WW-II radio equipment. Also need cables and antenna
loading coil in similar condition.

Lenox, WA5OVG
klccarru@tenet.edu

From boatanchors@theporch.com Tue Sep 17 11:53:33 1996
From: Cal Eustaquio N6KYR <ceustaqu@dot.w6bhz.calpoly.edu>
Subject: WTB:Spare R-390A audio module
Message-ID: <Pine.SUN.3.91.960917042029.3684A-100000@dot.w6bhz.calpoly.edu>

Anyone got a spare audio module they'd like to part with? I'm interested
in toying with the KD0HG mod. Cal, N6KYR.